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HISTORIC AMERICAN ENGINEERING RECORD

INDEX TO PHOTOGRAPHS

ROCKY FLATS PLANT, CRITICAL MASS LABORATORY HAER No: CO-83-A
(Rocky FIats Plant, Building 886
(Rocky Flats Plant, BuiIding 86)
Located at the intersection of Central Avenue and 86 Drive.
Golden Vicinity
Jefferson County
Colorado

Photographs from the Rocky Flats Environmental Technology Site Archives. Photographs were taken by various site photography contractors.

CO-83-A-1 VIEW OF THE WEST ELEVATION, LOOKING EAST, OF BUILDING 886 WHILE UNDER CONSTRUCTION IN 1964. ON THE RIGHT OF THE PHOTOGRAPH IS THE CRITICALITY ASSEMBLY ROOM, ROOM 101, CONSTRUCTED OF DOUBLE REINFORCED CONCRETE WALLS INTEGRALLY CAST TO THE TWO FEET THICK CEILING. IN THE FOREGROUND, IS THE 19' FEET DEEP PIT AREA INTENDED TO HOUSE WASTE SOLUTION STORAGE TANKS. ONLY ONE TANK WAS USED, TO STORE WASTEWATER.

CO-83-A-2 VIEW OF THE EXPERIMENT CONTROL PANEL IN 1970. THE NUCLEAR SAFETY GROUP CONDUCTED ABOUT 1,700 CRITICAL MASS EXPERIMENTS USING URANIUM AND PLUTONIUM IN SOLUTIONS (900 TESTS), COMPACTED POWDER (300), AND METALLIC FORMS (500). ALL 1,700 CRITICALITY ASSEMBLIES WERE CONTROLLED FROM THIS PANEL.

CO-83-A-3 VIEW OF THE DEPRESSION PIT IN ROOM 103, IN 1965, WHEREIN FISSILE SOLUTION WAS STORED. THIS PHOTOGRAPH SHOWS THE URANIUM SOLUTION TANKS ON THE LEFT AND THE PLUTONIUM SYSTEM ON THE RIGHT. NO PLUTONIUM SOLUTION WAS EVER STORED IN BUILDING 886.

CO-83-A-4 VIEW OF ROOM 103 IN 1980. SIX OF THE NINE URANIUM NITRATE STORAGE TANKS ARE SHOWN. HIGHLY ENRICHED URANIUM WAS INTRODUCED INTO THE BUILDING IN THE SUMMER OF 1965 AND THE FIRST EXPERIMENTS WERE PERFORMED IN SEPTEMBER OF 1965. EXPERIMENTS WERE PERFORMED ON ENRICHED URANIUM METAL AND SOLUTION, PLUTONIUM METAL, LOW ENRICHED URANIUM OXIDE, AND SEVERAL SPECIAL APPLICATIONS. AFTER 1983,

EXPERIMENTS WERE CONDUCTED PRIMARILY WITH URANYL NITRATE SOLUTIONS, AND DID NOT INVOLVE SOLID MATERIALS.

CO-83-A-5 VIEW OF THE INSPECTION PORT ON THE SIDE OF A TYPICAL URANIUM SOLUTION STORAGE TANK IN 1996. INSIDE THE TANK ARE RASCHIG RINGS, WHICH ACT AS NEUTRON ABSORBERS TO CONTROL FISSION AND KEEP THE SOLUTION AT SUB-CRITICAL.